

## Muscular Chains

Code: 103012  
 ECTS Credits: 6

Degree	Type	Year	Semester
2500892 Physiotherapy	OT	4	0

The proposed teaching and assessment methodology that appear in the guide may be subject to changes as a result of the restrictions to face-to-face class attendance imposed by the health authorities.

### Contact

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### Use of Languages

Principal working language: catalan (cat)

Some groups entirely in English: No

Some groups entirely in Catalan: Yes

Some groups entirely in Spanish: No

### Teachers

Patricia Meijide Vazquez

Silvia Pozo Fernandez

### Prerequisites

It is advisable to have the acquired knowledge of Anatomy and Physiology of the device Locomotive, Foundations in Physiotherapy, Biophysics,

Human Pathology and Physiotherapy of the Locomotive device I and II

### Objectives and Contextualisation

The subject is programmed in the fourth year of the Degree in Physiotherapy and is part of the subjects of "Depths of the locomotive device"

### Competences

- Design the physiotherapy intervention plan in accordance with the criteria of appropriateness, validity and efficiency.
- Develop critical thinking and reasoning and communicate ideas effectively, both in the mother tongue and in other languages.
- Develop independent learning strategies
- Display critical reasoning skills.
- Display knowledge of the morphology, physiology, pathology and conduct of both healthy and sick people, in the natural and social environment.
- Display knowledge of the physiotherapy methods, procedures and interventions in clinical therapeutics.
- Evaluate the functional state of the patient, considering the physical, psychological and social aspects.

- Integrate, through clinical experience, the ethical and professional values, knowledge, skills and attitudes of physiotherapy, in order to resolve specific clinical cases in the hospital and non-hospital environments, and primary and community care.
- Make a physiotherapy diagnosis applying internationally recognised norms and validation instruments.
- Solve problems.
- Work in teams.

## **Learning Outcomes**

1. Assess and treat the muscle chains, the movement of the nervous system, using neurodynamic techniques, and the joints, using osteopathic manual therapy.
2. Define the general and specific objectives for the application of physiotherapy treatment, according to the specific methods of muscle chains, neurodynamics and osteopathic manual therapy applied to the treatment of the musculoskeletal system.
3. Describe and apply physiotherapy assessment procedures to the disorders that affect muscle chains, the movement of the nervous system in relation to itself and to its surroundings, and the joints as seen from an osteopathic perspective, with the aim of determining the degree of damage to the musculoskeletal system and its possible functional repercussions.
4. Describe the circumstances that can influence priorities when practising physiotherapy, according to the specific methods of muscle chains, neurodynamics and osteopathic manual therapy applied to the treatment of the musculoskeletal system.
5. Develop critical thinking and reasoning and communicate ideas effectively, both in the mother tongue and in other languages.
6. Develop independent learning strategies
7. Display critical reasoning skills.
8. Enumerate the different types of material and apparatus used in physiotherapy treatment, according to the specific methods of muscle chains, neurodynamics and osteopathic manual therapy applied to the treatment of the musculoskeletal system.
9. Establish a diagnostic physiotherapy hypothesis based on clinical cases, according to the specific methods of muscle chains, neurodynamics and osteopathic manual therapy applied to the treatment of the musculoskeletal system.
10. Explain the physiopathological mechanisms of the disorders that affect the muscle chains, the movement of the nervous system in relation to itself and to its surroundings, and the joints as seen from an osteopathic perspective.
11. Solve problems.
12. Use physiotherapy to treat clinical cases, according to the specific methods of muscle chains, neurodynamics and osteopathic manual therapy applied to the treatment of the musculoskeletal system.
13. Work in teams.

## **Content**

The course aims to enable the student to be able to make global and not so analytical approaches to any one pathology presented to him, based on the concept of muscle chains, understood as circuits anatomical, through which forces are propagated responsible for stabilizing and mobilizing the human body (Leopold Busquet).

Unit 1

Introduction.

Organization of muscle strings.

PROFESSOR: Júlia Casas Codina - [jcasas@tauli.cat](mailto:jcasas@tauli.cat)

Unit 2

The static chain:

- The later static chain.

- The deep static chain.

- The previous static chain.

The antigravity system.

PROFESSOR: Patricia Meixide Vazquez - p.meixide@gmail.com

Unit 3

The straight systems of the trunk:

- The anterior straight trunk system.

- The rear rectus system of the trunk.

- Complement the straight system.

PROFESSOR: Júlia Casas Codina jcasas@tauli.cat

Unit 4

The crossed systems of the trunk.

- The previous crossed trunk system.

- The rear trunk system of the trunk.

- Links of the crossed chains.

The movements of the trunk.

PROFESSOR: Júlia Casas Codin.a jcasas@tauli.cat.

Unit 5.

The static chain of the neck.

Straight neck systems.

- The right anterior neck system.

-The rectum posterior system of the neck.

PROFESSOR: Júlia Casas Codina jcasas@tauli.cat.

Unit 6

Cross-neck systems.

Active axial self-extension.

PROFESSOR: Júlia Casas Codina jcasas@tauli.cat /

Unit 7

The muscular chains of the EESS.

PROFESSOR: Patricia Meixide Vazquez - p.meixide@gmail.com

Unit 8

The muscle chains of the EEII.

Pubalgia.

PROFESSOR: Patricia Meixide Vazquez - p.meixide@gmail.com

Unit 9

Constriction diaphragm.

-Anatomy and physiology.

Relationship with vital functions.

- Breathing.

- Digestion.

- Circulation.

PROFESSOR: Silvia Pozo spozo@tauli.cat

Unit 10

Compensations.

- Abdominal cavity.

- Thoracic cavity.

- Pelvic cavity.

PROFESSOR: Silvia Pozo spozo@tauli.cat

The three professors participate in the laboratory practices.

## Methodology

The subject is based on theoretical classes, and theoretical-practical seminars. Discussion of clinical cases, and valuations among students.

Group work supervised by teachers will be included.

### TEACHING TYPES OF DIRECT:

Theory (master classes; TE typology). Group size: enrollment group. Scheduled sessions 38.

Clinical laboratory practices (PLAB typology). Group size: 10-20 students.

Scheduled sessions: 7 hours. They are carried out in the classroom of clinical skills within a scheduled time and they are aimed at the acquisition of clinical skills.

Attendance to laboratory practices is mandatory.

## Activities

Title	Hours	ECTS	Learning Outcomes
Type: Directed			

LABORATORY PRACTICALS (PLAB)	7	0.28	12, 1, 3, 8, 9
THEORY (TE)	38	1.52	12, 1, 2, 3, 4, 8, 9, 10
Type: Supervised			
ORAL PRESENTATION/EXPOSITION OF WORKS	10.5	0.42	12, 1, 2, 3, 4, 8, 9, 10
Type: Autonomous			
READING ARTICLES /REPORTS OF INTEREST	20	0.8	12, 1
SELF-STUDY	40	1.6	2, 8, 9
works delivery	27	1.08	12, 1, 8, 9

## Assessment

70% of the final mark will consist of two partial written tests of multi-answer test type on each question correctly answered will be assessed with 1 point.

The wrong questions will be 0.25punts, and instead they will not answered, neither will they add or subtract.

The fact of suspending one of the exams will oblige you to appear in the recovery test which will include the content of the entire subject.

The minimum score to pass the exam is 5. The recovery exam will be made according to the calendar a end of first semester.

The remaining 30% will consist of the realization and exhibition of a work that will be developed after them knowledge acquired in practical seminars.

Attendance to laboratory practices is mandatory if this is not the case, the student will only be able to choose how maximum to 5 of the note of the work.

Of these practices only the following cases will be considered justified faults:

- Labor motives (attach employment contract).
- Common illness (with medical justification) or scheduled medical visit.
- Causes of force majeure:
  - Serious illness or death of a relative of up to the second degree.
  - Elite sportsmen who have official competitions.
  - Driver license exam.
  - Official university exams.
  - Official language tests.

"Not evaluable" will be considered as not presenting and exposing the work of Static-dynamic global assessment VEDG

and / or not present at the final exam of the subject.

## Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Practical evaluations	30%	5.5	0.22	12, 1, 2, 3, 4, 6, 5, 9, 10, 7, 11, 13
Written assessments: objective tests	70%	2	0.08	12, 1, 2, 3, 4, 8, 9, 10

## Bibliography

- § Busquet, Léopold (1995-2006 ). Las Cadenas musculares . Barcelona: Paidotribo.
- § BUSQUET, L (2009). Las cadenas musculares. (Tomo I). Tronco y columna cervical .Ed. Paidotribo .
- § BUSQUET, L (2010). Las cadenas musculares.(Tomo II). Lordosis, cifosis, escoliosis y deformaciones . Ed. Paidotribo .
- § BUSQUET, L (2011). Las cadenas musculares.(Tomo III). La Pubalgia. Ed. Paidotribo .
- § BUSQUET, L. (2011). Las cadenas musculares. (Tomo IV). Miembros inferiores . Ed. Paidotribo .
- § BUSQUET-VANDERHEYDEN, MICHÈLE.BUSQUET, LÉOPOLD. (2010). Cadenas fisiológicas, las (tomo VII). La cadena visceral Tórax - Garganta - Boca. Ed. Paidotribo.
- § Souchart, Philippe-Emmanuel (cop.2005). PRG: principios de reeducación postural global. Barcelona: Paidotribo
- § Souchart, Philippe-Emmanuel (2000). Streching global activo. Ed. Paidotribo